

Strategic Weapons in the 21st Century



U.S. Strategic Capabilities for Preventing War: The Way Forward

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Overview

- An Ends-Ways-Means Framework for the Next NPR and A First-Cut Application
- 8 Recommendations
- Conclusions



Next Nuclear Posture Review

- **Recommended Methodology**
 - Use an Ends-Ways-Means Framework
 - Tailor Country-Specific Strategies and Consider Interactions
 - Use All Tools of National Power
 - Consider Alternative Futures and Balance Risk
 - Set Priorities
- **Goal**
 - Bipartisan consensus on a sustainable path ahead
- **First-Cut Analysis Follows**
 - Ends generally agreed -- terminology may change from “ADD”
 - Must address “ways” to set priorities for “means” (capabilities)
 - (For this paper focus on “New Triad”)



“Ways” – How Deter/Dissuade/Assure

Capability Area	Russia (goals: Assure, Dissuade, Deter)	Potential Nuclear Challengers (goals: Assure, Dissuade, Deter)	China (goals: Assure, Dissuade, Deter)	Terrorist Groups, Non-state Actors (goals: Dissuade, Deter, Disrupt, Defeat)	Allies and Friends (goal: Assure)
Nuclear Strike	Small safe secure arsenal capable of devastating 2nd-strike, incapable of splendid 1 st -strike	Small safe secure arsenal capable of devastating 1st or 2nd-strike	<i>Arsenal scaled to dissuade nuclear parity-seeking by China (??)</i> <i>Incapable of splendid 1st-strike (??)</i>	Safe secure inventory and materials with no opportunities for theft or diversion	U.S. strategic nuclear capabilities second to none
Defenses	Protection against accidental launches without threatening Russian 2 nd -strike	Defenses that <u>do</u> negate viability of 1st-strike	<i>Defenses that do not threaten viability of Chinese 2nd-strike (??)</i>	Layered defense that can defeat all delivery means	Effective combined defenses against possible nuclear challengers, terrorists
Non-Nuclear Strike	Capabilities that do not threaten viability of Russian 2 nd -strike	Conventional strike systems that <u>do</u> threaten WMD capabilities	<i>Capabilities that do not threaten viability of Chinese 2nd-strike (??)</i>	Discriminant capability to defeat or disrupt operations	Effective combined strike capabilities
C3	Secure nuclear- survivable C3	Rapid decision-making for integrated offense/defense and nuclear/non-nuclear ops	<i>Rapid decision-making for offense/defense and nuclear/non-nuclear ops (??)</i>	Ability to support overt, covert and clandestine antiterrorist operations	Secure combined C3 including appropriate consultation processes
Intelligence	Intel on capabilities, perceptions and nuclear security	Intel on capabilities, perceptions and nuclear security	<i>Intel on capabilities, perceptions and nuclear security</i>	Intel on capabilities and networks	Secure ability to share information and inter-operate with allies
Infrastructure	Support dissuasion with adequate responsiveness	Support current and planned defensive and non-nuclear strike programs	Support dissuasion with adequate responsiveness	Support special operations and non-nuclear strike	Support combined capabilities
Strategic Communic.	U.S. desires long-term stability and nuclear risk reduction	Costs of competition or escalation with U.S. will outweigh gains	<i>U.S. seeks stability but will not allow Chinese military parity (??)</i>	You will not succeed in attacks against U.S. and allies/friends	U.S. strategic posture supports commitment to your security
Strategic Planning	Ability to undertake net assessments, conduct integrated planning within U.S. and with allies/friends, and anticipate and prepare for a wide range of possible futures and contingencies				



ADD “Ways” for Russia

Capability Area	ADD “Ways” (goals: Assure, Dissuade, Deter)
Nuclear Strike	Small safe secure arsenal capable of devastating 2nd-strike, incapable of splendid 1 st -strike
Defenses	Protection against accidental or unauthorized launches without threatening Russian 2 nd -strike
Non-Nuclear Strike	Capabilities that do not threaten viability of Russian 2 nd -strike
C3	Secure nuclear- survivable C3
Intelligence	Intel on capabilities, perceptions and nuclear security
Infrastructure	Support dissuasion with adequate responsiveness
Strategic Comm. (Key Messages)	U.S. desires long-term stability and nuclear risk reduction



ADD “Ways” for Potential Nuclear Challenges

Capability Area	Potential Nuclear Challenges (goals: Assure, Dissuade, Deter)
Nuclear Strike	Small safe secure arsenal capable of devastating 1st or 2nd-strike
Defenses	Defenses that do negate viability of 1st-strike
Non-Nuclear Strike	Conventional strike systems that do threaten WMD capabilities
C3	Rapid decision-making for integrated offense/defense and nuclear/non-nuclear ops
Intelligence	Intel on capabilities, perceptions and nuclear security
Infrastructure	Support current and planned defensive and non-nuclear strike programs
Strategic Comm. (Key Messages)	Costs of competition or escalation with U.S. will outweigh gains



ADD “Ways” for China

Capability Area	China (goals: Assure, Dissuade, Deter)
Nuclear Strike	Arsenal scaled to dissuade nuclear parity-seeking by China (??) Incapable of splendid 1st-strike (??)
Defenses	Defenses that do not threaten viability of Chinese 2nd-strike (??)
Non-Nuclear Strike	Capabilities that do not threaten viability of Chinese 2nd-strike (??)
C3	Rapid decision-making for offense/defense and nuclear/non-nuclear ops (??)
Intelligence	Intel on capabilities, perceptions and nuclear security
Infrastructure	Support dissuasion with adequate responsiveness
Strategic Comm. (Key Messages)	U.S. seeks stability but will not allow Chinese military parity (??)



ADD “Ways” for Terrorist Groups and Other Non-State Actors

Capability Area	Terrorist Groups, Non-state Actors (goals: Dissuade, Deter, Disrupt, Defeat)
Nuclear Strike	Safe secure inventory and materials with no opportunities for theft or diversion
Defenses	Layered defense that can defeat all delivery means
Non-Nuclear Strike	Discriminate capability to defeat or disrupt operations
C3	Ability to support overt, covert and clandestine antiterrorist operations
Intelligence	Intel on capabilities and networks
Infrastructure	Support special operations and non-nuclear strike
Strategic Comm. (Key Messages)	You will not succeed in attacks against U.S. and allies/friends



“Ways” to Assure Allies and Friends

Capability Area	Allies and Friends (goal: Assure)
Nuclear Strike	U.S. strategic nuclear capabilities second to none
Defenses	Effective combined defenses against possible nuclear challengers, terrorists
Non-Nuclear Strike	Effective combined strike capabilities
C3	Secure combined C3 including appropriate consultation processes
Intelligence	Secure ability to share information and inter-operate with allies
Infrastructure	Support combined capabilities
Strategic Comm. (Key Messages)	U.S. strategic posture supports commitment to your security



Key Capability Underwriting all ADD “Ways”

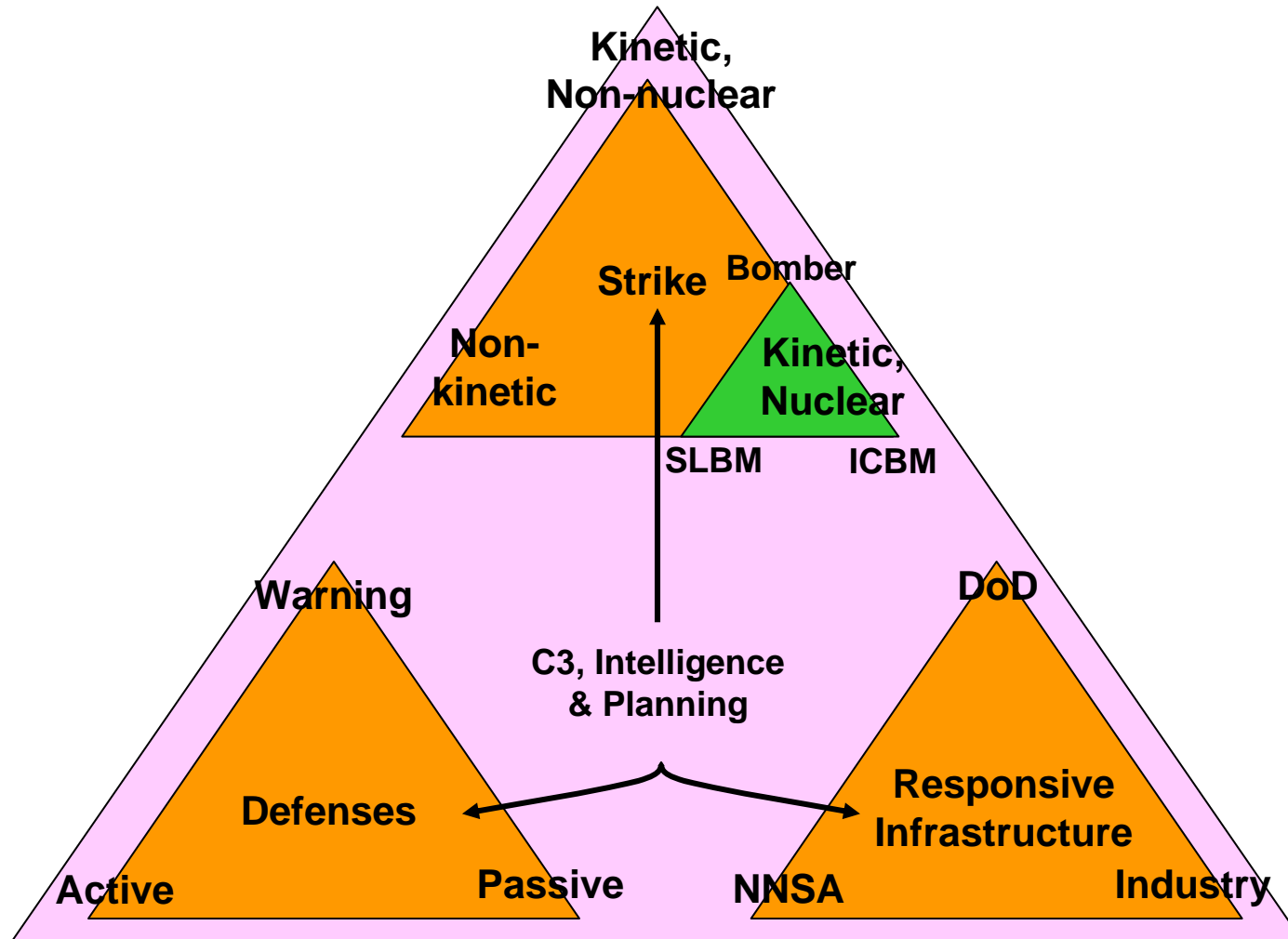
Strategic Planning	Ability to undertake net assessments, conduct integrated planning within U.S. and with allies/friends, and anticipate and prepare for a wide range of possible futures and contingencies
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Net assessment and analytical capabilities at any given time will imperfect

Should make best effort, identify key uncertainties and disagreements, and structure to learn over time



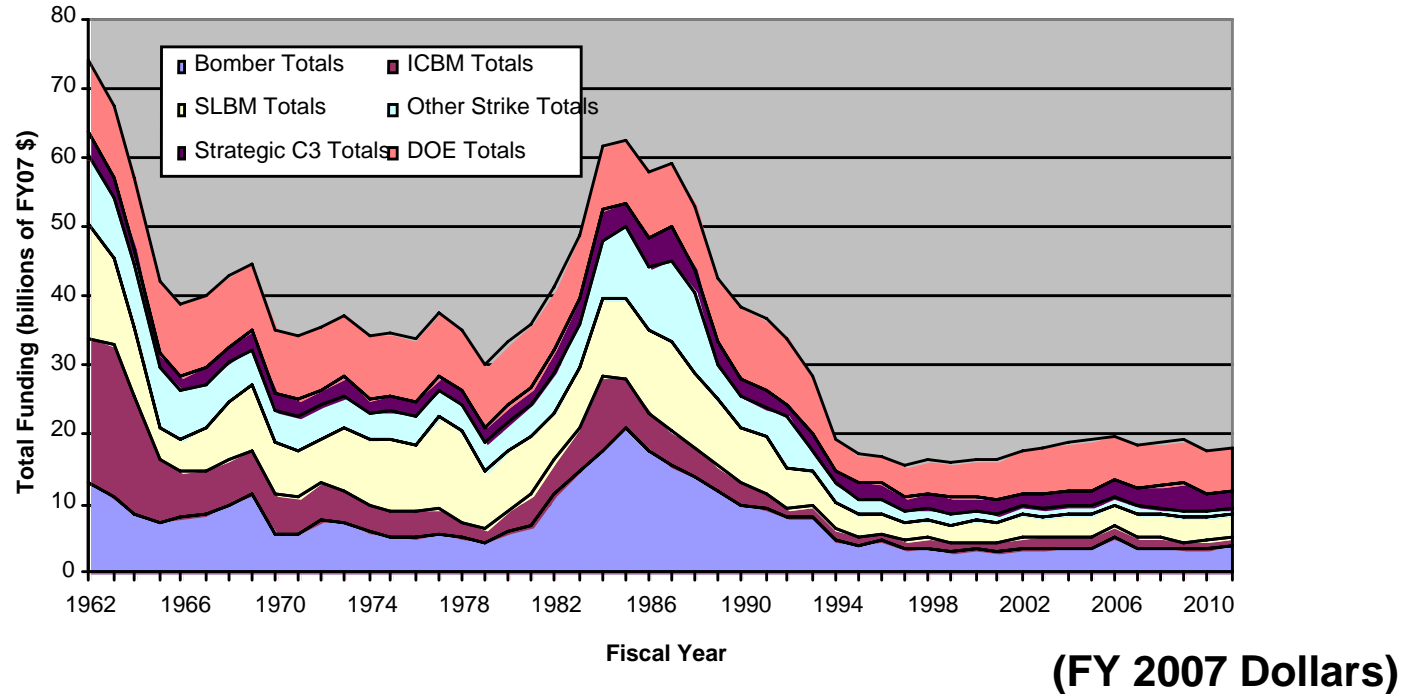
The “New Triad”





DoD/DOE Strategic Funding History

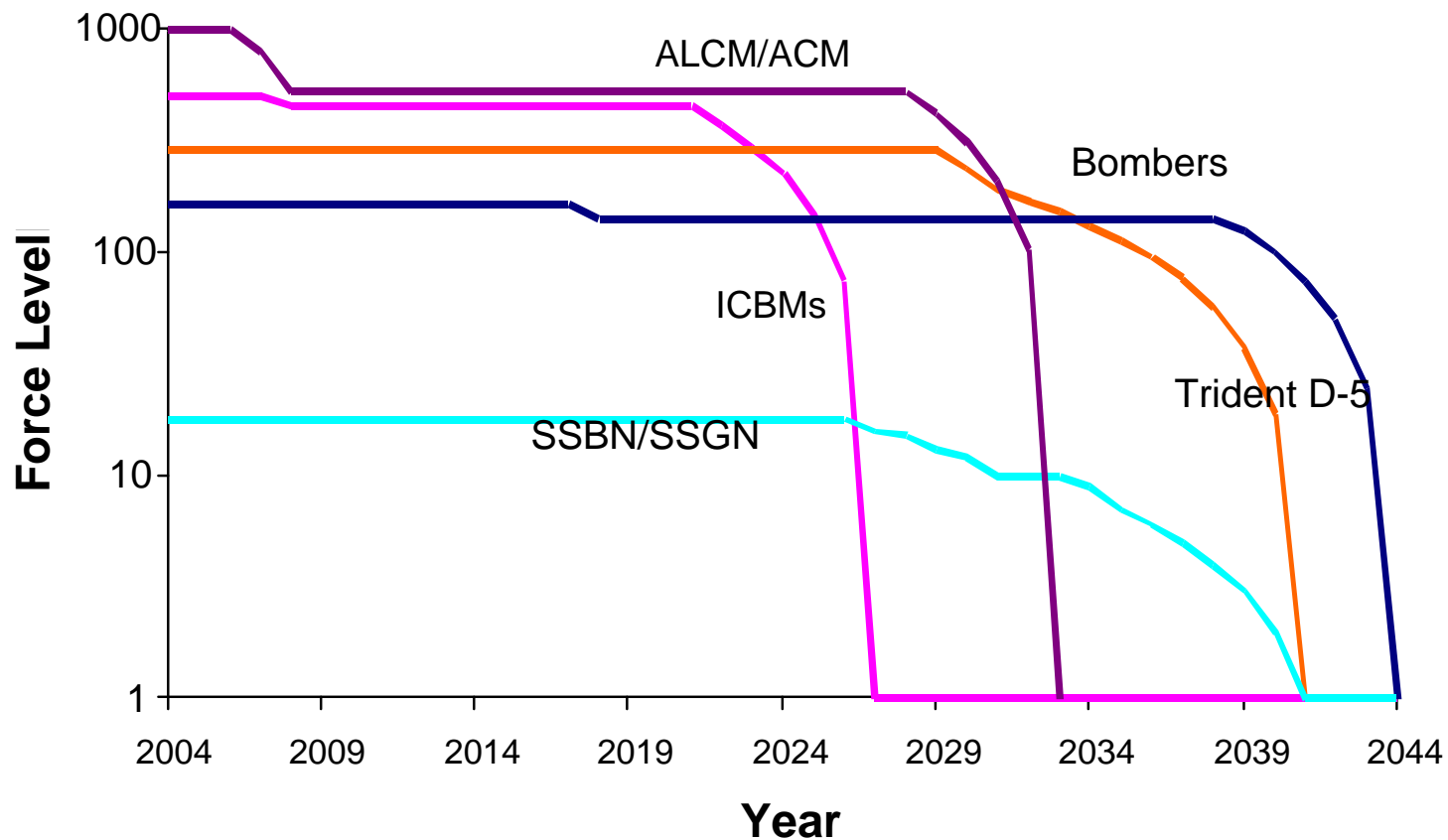
Strategic Offense, C3, and DOE/Weapons



Source: Department of Defense



“Old Triad” Force Levels Without Replacement Systems



Source: Department of Defense



ONE SIZE DOES NOT FIT ALL

- Inadequate understanding of what it takes to assure, dissuade, and/or deter
- No coordinated interagency planning for tailored ADD
- No metrics
- Inadequate understanding of second-order effects among ADD
- U.S. should take preventing war as seriously as it took preparing for it in the Cold War

Rec. #1: DoD, in coordination with the intelligence community and State Department, should establish an on-going program for the country-by-country assessment of appropriate policies and capabilities to support U.S. policy goals including assurance, dissuasion and deterrence. Because there may be important interaction effects within and between countries, and between the U.S. and these countries, the program should provide an annual net assessment.



DoD PROCESSES OPTIMIZED FOR FIGHTING WARS vs. PREVENTING THEM

- Planning, requirements and acquisition processes in DoD optimize capabilities that address approved defense planning scenarios that focus on war fighting
- Existing analytic tools are designed for war fighting
- No agreed measures of effectiveness for assure, dissuade, deter

Rec. #2: DoD, within its planning, requirements and acquisition systems, should develop appropriate analytic tools and use planning scenarios designed to evaluate which specific strategic capabilities most effectively contribute to the avoidance of warfare by assuring, dissuading, and deterring.



COLD WAR WEAPON SYSTEMS WON'T LAST FOREVER AND MAY NOT FIT FUTURE

- “Old Triad” is stumbling along on life extensions
- Program of Record weak on replacement systems
- Fiscal reality challenges future numbers and types
- No agreed future program between Administration and Congress

Rec. #3: The United States should develop a plan for the replacement of nuclear delivery systems. The next NPR should reexamine the value of diversity in nuclear delivery systems as perceived by those we hope to assure, dissuade and deter. Further reductions in U.S. and Russian nuclear weapons systems should be evaluated, while being alert to the concerns of allies and friends regarding their confidence in the United States umbrella.



WILL THE COLD WAR NUCLEAR WEAPON STOCKPILE REALLY ADD?

- The nuclear stockpile is making do on life extensions
- US is only nuclear nation lacking production capacity
- Perceptions of eroding capabilities may undermine dissuasion and assurance
- Future reductions in perceived reliability may undermine deterrence
- Current yields of nuclear weapons are absurdly high – may hinder deterrence and assurance
- No agreed future program between Administration and Congress

Rec. #4: The next administration should work to develop a bipartisan consensus in Congress on an agreed path forward for the replacement of aging nuclear weapons over the coming decades, including defining the role of the Reliable Replacement Warhead.



THE ABILITY TO DENY DAMAGE CAN BE A MAJOR CONTRIBUTOR TO ADD

- Substantial Ballistic Missile Defense expenditures have bolstered hopes for negating rogue and unauthorized missile attack
- Consequence reduction programs show promise for reducing the impact of chemical and biological attack
- Consequence reduction programs for nuclear and radiological dispersal are poorly funded

Rec. #5: Deterrence and dissuasion by denial, by denying effectiveness to the destructive capabilities of potential adversaries also offers the preservation of lives and infrastructure if attack comes. The Administration should work with the Congress to better balance investments in these areas.



NO PROMPT NON-NUCLEAR STRATEGIC STRIKE LEAVES ONLY NUCLEAR OPTION

- Precision guidance technology allows non-nuclear missiles to threaten targets previously vulnerable only to prompt nuclear strike
- Non-nuclear missiles have no role in large assured second strike
- Congressional opposition has blocked progress on prompt non-nuclear global strike

Rec. #6: The U.S. should define the scope of non-nuclear strategic missiles that can effectively deter small and emerging nuclear powers while clearly not threatening the deterrent of peer and near peer competitors. Consideration should be given to transparency regimes that would eliminate any concerns of China or Russia.



A RESPONSIVE INFRASTRUCTURE → REDUCED STOCKPILE + DISSUASION

- Responsiveness requires ready research, development, and production facilities and the experienced people to make the facilities work
- US will soon lack such infrastructure in critical nuclear weapon systems through the loss of facilities
- Weapon system expertise retiring without replacement
- To effectively dissuade, responsiveness must be demonstrable, e.g. exploratory development (even without full scale production) at a minimum
- Congressional opposition to date threatens to eliminate infrastructure as a contributor to dissuasion and possibly deterrence and assurance as well

Rec. #7: The next administration should work with Congress to develop an agreed approach on the infrastructure that supports nuclear weapons and delivery systems and retains the critical skills necessary to preserve the credibility of deterrence. This should be part of a dialogue associated with the next NPR on the full range of issues relating to nuclear weapons, proliferation and arms control.



STRATEGIC COMMUNICATION KEY TO ADD AND ASSESSMENT OF EFFECTS

- US understanding of US objectives is not enough
- Success of assurance, dissuasion, and deterrence will be determined by those the US wishes to assure, dissuade or deter
- Continuing direct communications will be important to reducing misperception and achieving US objectives

Rec. #8: The United States should continue and expand discussions with Russia and China regarding the strategic balance, including nuclear and conventional strike and ballistic missile defenses. Equally important are the interactions necessary to understand whether allies and friends, and potential nuclear challengers have understood U.S. strategic communications.



Conclusions

- **Major issues re: “ways” of ADD should be addressed in the next NPR, e.g.,**
 - What relationship do we want / can we achieve vis-à-vis China?
 - Is it feasible to begin gradual long-term shift to a mixed offense-defense relationship vis-à-vis Russia?
 - What are the maximal prompt non-nuclear capabilities re: potential nuclear challengers that do not disturb US-Russia, US-China balances?
 - What U.S. capabilities are really needed for assurance of friends/allies?
- **Paper provides 8 recommendations for the way forward**
 - This paper’s 1st-cut analysis focuses on ADD goals and “New Triad” capabilities – other goals (e.g., non-proliferation) and all tools of national power should be addressed in full-up review.
- **2 Priority Objectives for Next NPR**
 - Significantly increase analytical effort on ADD/preventing war – within DoD and across interagency
 - Move toward a sustainable bipartisan consensus on long-term vision and next steps